1:Stanford U. S-4, 5 1956 AF16 SW China
AF16

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487 The section between I-chang and I-pin of the Yangtze River has a navigability rating of Grade 3, i.e., navigable for boats up to 1,000 tons. The section between I-pin and Lo-shan on the Min River and the section between Chungking and Kuang-yüan on the Chia-ling River have a navigability rating of Grade 4, navigable by steamers of 600 tons. All the other rivers have a lower rating than Grade 4 are navigable only by junk.

A. Inland Shipping

•501 Before the resistance against Japan, China's total shipping tonnage was about 576,000 tons, including 124 ocean steamers totaling 367,383 tons and 3,333 river steamers totaling 208,617 tons. During the war, it was estimated that about 495,329 tons of both types of steamers were lost.[61] After the war, 2,751 Japanese ships of various types, with a total of 251,288 tons, were confiscated, including 507 river boats (62,375 tons) in the Yangtze River area.[62]

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61. Hang-yün [Navigation], Nanking, Hsing-cheng-yuan, Hsin-wen-chü [Bureau of Information, Executive Yuan], 1949, p. 24.

62. Ibid., p. 23.

1:Stanford U. S-4, 5 1956 AF16 SW China AF16

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Table 6. Shipping Tonnage of the Yangtze River Area in 1947*

Shipping Classification	Number of Ships	Gross Tonnage
By size		
60 tons--200 tons	460	25,964
201 tons--8,000 tons	47	36,411
Total	507	62,375
By Ownership		
National	160	28,959
Private	347	33,416
Total	507	62,375

* Hang Yün [Navigation], Nanking, Hsing-cheng-yuan, Hsing-wen-chü, [Bureau of Information, Executive Yuan], 1947, pp. 24-28.

1:Stanford U. S-4, 5 1956 AF16 SW China
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B. Recent Developments

501 The Nationalist Government moved a great many government-owned ships from the China Mainland to Taiwan in 1949. It was estimated that less than 20 per cent of the shipping tonnage of the government-owned China Merchant Steamship Company was left to the Communists.[63] But due to the Communists' vigorous efforts in ship-building and ship-repairing, the number of ships available increased substantially in the period 1951-55. The People's Refloating Company has salvaged over 100 steamers of different sizes(totaling over 100,000 gross tons.)[64] adn of these salvaged vessels, the largest is the steamship Chiang-hsin, which is now in operation on the Yangtze River between the port of Shanghai and ports in Szechwan.[65]

503 River-dredging in Szechwan Province progressed rapidly during the three-year period prior to 1955, and a great many rocks and sand bars have been removed, enabling large

63. Economic Weekly, Shanghai, Jan. 1950, pp. 7-8.
64. Wen-hui Daily, Hong Kong, Oct. 12, 1955.
65. Ibid.

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16
Sino-Tibetan Border AE3
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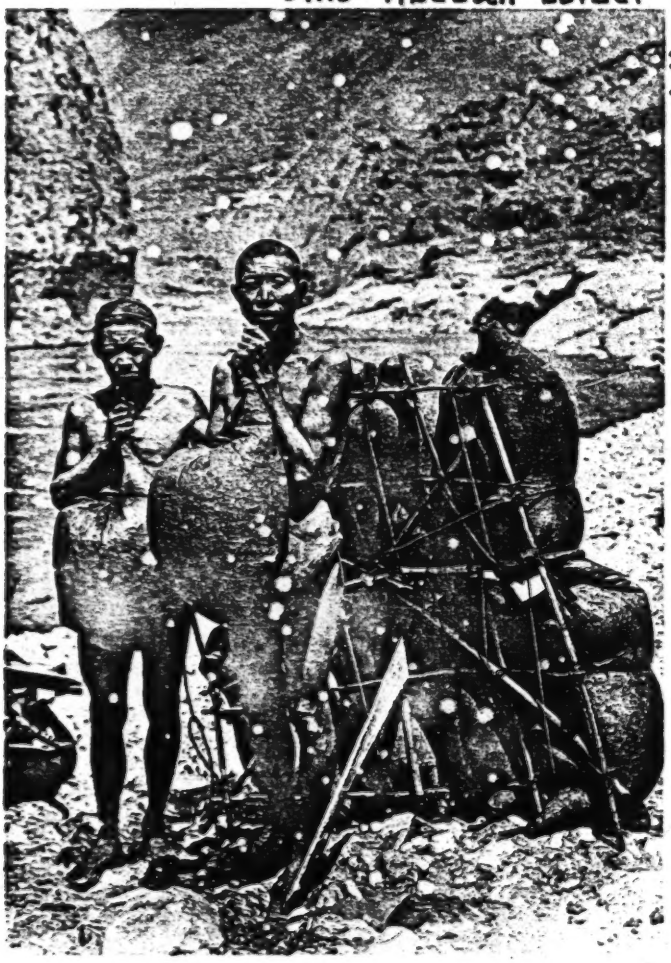

PLATE 143. — NA-KHI SWIMMERS WITH THEIR RAFT

打箭爐納西會泅江

Every time they plunge into the icy waters of the Yangtze, they must inflate their goatskin bags as well as those of the raft.

[p. 244 G]

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF/6

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PLATE 144. — ARRIVAL OF ONE OF THE EXPEDITION'S GOATSKIN RAFTS ON THE TA-TU SIDE

A trunk and a man were ferried across at a time, the swimmers pulling and pushing the raft. The horses had to swim.

[p. 244 H]

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

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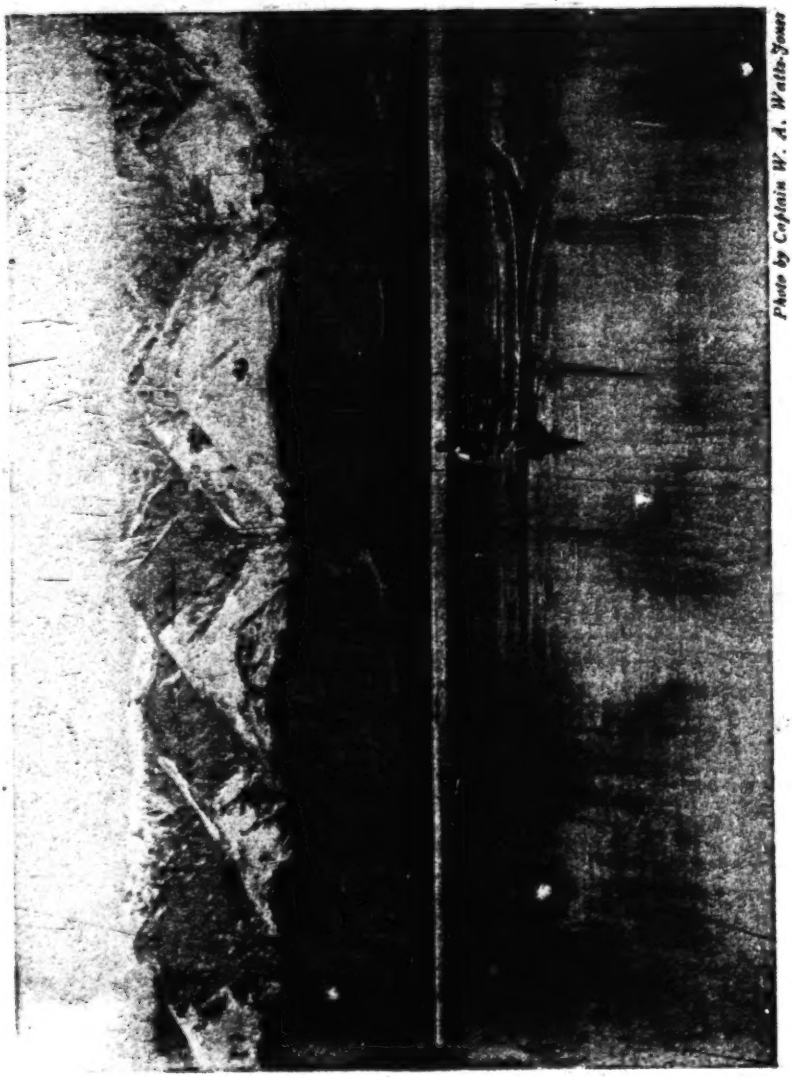
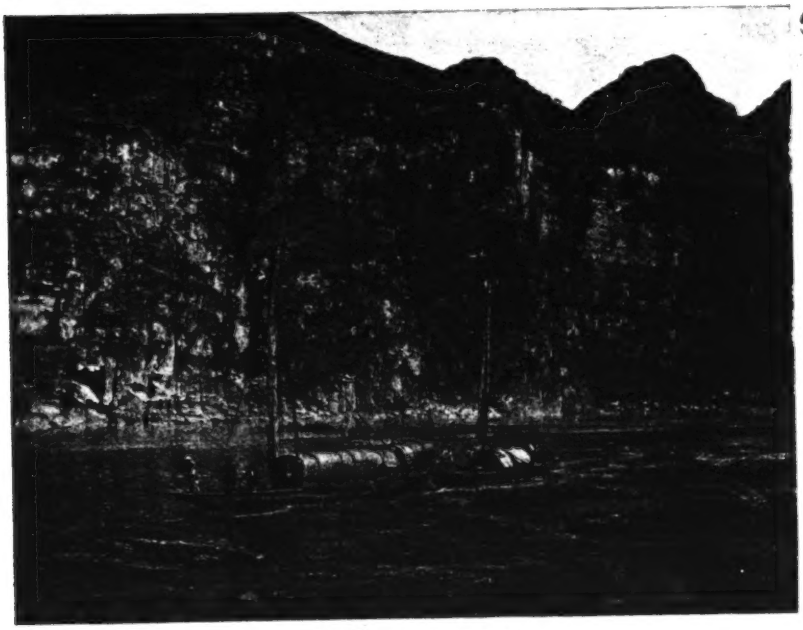


Photo by Captain W. A. Wells-Jones

The lake and mountains of Ta-li Fu

[Frontispiece]
[facing p. iii]

501.



The Yangtze gorges

Photos by Captain E. W. Mahon

The Yangtze gorges

Plate II

[Face p. 8]

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16
Pai-i AE7

Lu Chiang, the Shans the Nam Hkong, and our name for it is a corruption of the Burmese name Than-lwen. It is crossed by another of the iron chain bridges, in this case of two spans, the only two-span bridge of this sort in the province as far as I know. The construction of the pier in the middle is assisted by the fact that the westerly span, which is 50 yards long only, crosses what is in the dry season chiefly shingle with a shallow stream running over it. The eastern span, 80 yards in length, crosses the main part of the river. The bridge has naturally been built at the narrowest place possible, so that 80 yards must not be taken as a fair estimate of the breadth of the Salween in this part of its course. Above and below the bridge its width varies from 100 to 160 yards. It has a fairly strong current and must be very deep in the middle.

At the time the bridge was under repair, and we had to cross by ferry two miles lower down. They were removing the stones of the pier to look at each chain and see whether it wanted replacing. The repair of the bridge is not undertaken by the Chinese Government, but is paid for by a subscription got up by the merchants of T'êng-yüeh. It was noticeable that the ferry was worked by five bamboo rafts specially constructed for the purpose: there is not a single boat in the plain. The Salween, like so many other Yünnanese rivers, is useless for navigation. There are quiet stretches where it would be quite possible, but the frequent occurrence of rapids would prevent boats from going more than a few miles.

We crossed the river and camped on the opposite bank at a height which my boiling-point thermometer made 2,200 feet, by far the lowest elevation anywhere in this part of Yün-nan. The climate was consequently at this time of year very pleasant, not hot in the daytime, and not too cold at night. The vegetation was entirely different from that of the country we had been passing through. Banyans, plantains, and other trees and shrubs peculiar to the warmer climates of Burma and the Shan States are to be found everywhere. The valley is in fact inhabited by Shans who call the plain Mong Hkö and are ruled by a sawbwa who lives a few miles below the bridge. This is practically the limit of the Shan race in this direc-

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

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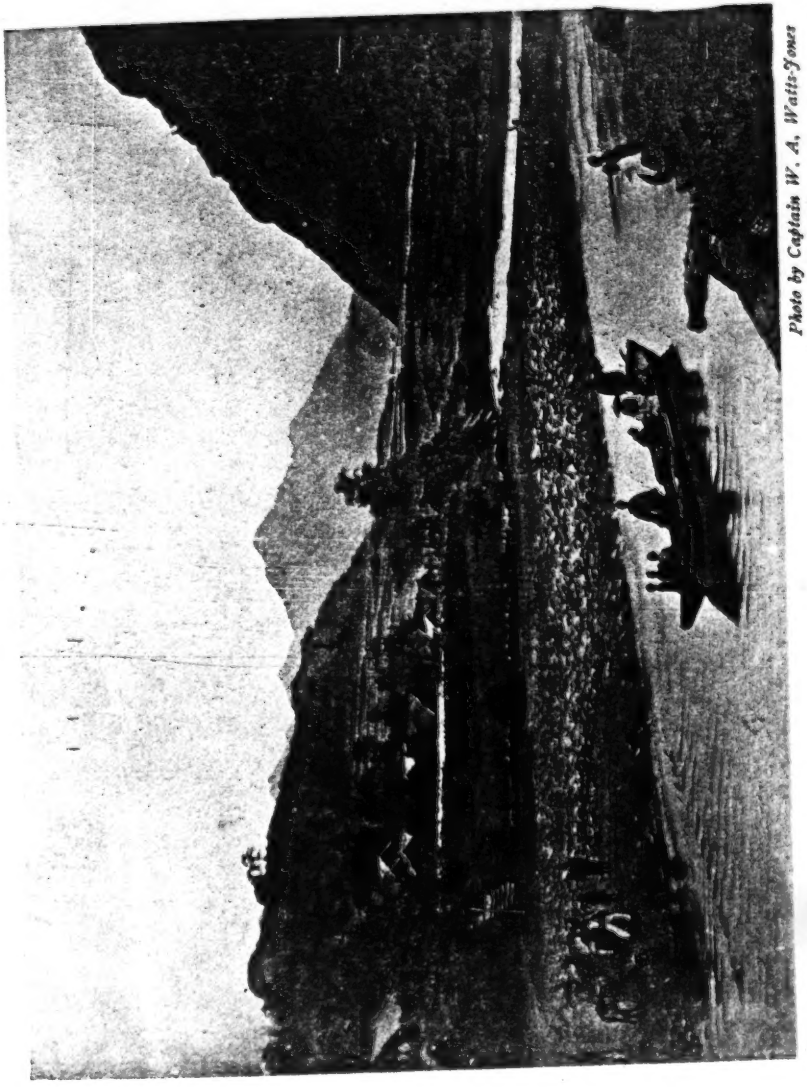

Photo by Captain W. A. Watts-Jones

Ferry over the K'o-tu Ho

Plate XXXVIII

[Face p. 164]

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

[501] 505 able to leave Man-hao the same day. The boats are some 50 feet long and 10 feet wide across the middle. They are said to carry a load of 10,000 lbs. I found plenty of room in one for myself and five followers and our baggage, besides the six men who formed the crew. The boat is got along by rowing, the crew having occasional "easies" during which we drifted down at a good pace, as the current is strong.

Three and a half hours' rowing brought us to the village of Hsin-kai, where we halted for the night, as boats cannot run after dark owing to the rapids. It poured with rain all the night through, and the matting roof of the boat was by no means equal to keeping out such a torrent.

Starting again at dawn the next day we went on at a good pace, negotiating several rapids, in one of which the boat struck a rock, but without doing any damage. The first sign of the French was the tricolor flying over a small fort on the right bank. This was Lung-po, the frontier post in this direction. From here down to Lao-kai the Red River is the boundary between Tong-king and China.

At half-past one we reached Ho-k'ou, just 24 hours from Man-hao, but of this time we had spent nearly 12 hours tied up at Hsin-kai. Ho-k'ou is a village of 500 houses or so, and is the last place in China in this direction, Lao-kai, the French frontier station, being separated from it by the Nam Ti or Nan-hsi Ho, which here joins the left bank of the Red River.

S. Davies G-5 (1894-1900) 1909 AF16 Southwest China AF18

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The bows of a Yangtze boat

Photos by Captain W. A. Watts-Jones

Towing boats up the Yangtze gorges

Plate LX

[Face p. 292]

Ta Hu K-5 (1934-) 1946 AF16 Southwest China AF16

505 difficulties (due to the rugged topography) of building other means of transportation in the Basin.

The harnessing of this mighty, swift, and treacherous stream by men for their own benefit, however, has been by no means an easy task. It is certainly not a story without excitement. There are tremendous difficulties involved in negotiating the world-famous Yangtse gorges, the numerous shoals, the whirlpools, and the rapids at intervals along the course of this mighty water-
• 501 way. For centuries, the Chinese, with their slow-moving but colorful junks, have battled patiently and painstakingly with the perilous river. It was not until 1898, after experimenting for nearly two decades, led by a brave Englishman, Captain A. Little and later followed by the tireless effort of many energetic Chinese leaders in the Basin, that the first modern steamboat successfully passed through the gorges and arrived at Chungking.[1] Three years later, in 1901, a trial voyage farthest west to Sui-fu (I-Ping) was successful.

It was not until 1909, ten years after the first trial voyage, that suitable, shallow, and specially-designed vessels with a sufficiently large carrying capacity were put into use and regular steam navigation on the upper Yangtse became commercially possible. Since then, the development has been phenomenal. In 1919 there were only about 220 steamers of all tonnage-classes, totalling 55,000 odd tons, plying the upper Yangtse between the I-Chang and I-Ping section. But by 1936 the number of steamers totalled 2,140, with a total tonnage of 760,000 tons.[2]

The growth of steam navigation on the Yangtse resulted in the rapid and almost complete disappearance of the old colorful Chinese junks on the upper Yangtse. In 1894, a peak year in junk traffic, there were altogether 2,900 junks, with a total tonnage of over 100,000 tons. By 1925, thirty years later, only one junk, with a tonnage of 20 tons, was reported in the river traffic of the upper Yangtse.

505 Of all the navigable tributaries of the Yangtse, the Chialing River system is by far the most important. At Chungking the Yangtse is joined on its left bank by this important tributary, the so-called "little river." This is made up of three streams

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[1] L. C. Cheng, "The Waterways in Szechuan," Journal of Geog. Society of China, VI (1939), 7.

[2] Shen, op. cit., p. 38.